

CLAIMS

1. A machine for transferring initially aligned objects (2) in successive rows (6), comprising a first
5 conveyor (1) suitable for bringing the objects (2) placed in line one after the other, characterized in that it comprises a second conveyor (4) comprising a tray (10) placed to the side of the first conveyor (1) and means of moving objects with at least one pushing
10 member (8) movable transversely to the first conveyor (1) so that it comes into lateral contact with n objects (2) on the first conveyor to push them together in a row (6) on the abovementioned tray (10) while moving them in a direction making an angle θ lying
15 between 0 and 90°, limits excluded ($\theta \neq 0$, $\theta \neq 90^\circ$) relative to the first conveyor (1),
thanks to which the objects have speed components in the directions of movement of the two conveyors, respectively, which are never zero.

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2. The machine as claimed in claim 1, characterized in that the two conveyors (1, 4) form between them an angle θ lying between approximately 20° and 70°.

25 3. The machine as claimed in claim 2, characterized in that the two conveyors (1, 4) form between them an angle θ of approximately 45°.

30 4. The machine as claimed in any one of claims 1 to 3, characterized in that the second conveyor (4) is suitable for moving the objects (2) on a substantially rectilinear trajectory and in that the second conveyor (4) comprises several pushing members (8) which are substantially parallel and supported by endless running
35 support means (11) extending in a plane approximately perpendicular to the plane of transfer of the objects.

5. The machine as claimed in claim 4, characterized in that the endless running support means comprise an endless chain (11) supporting pushing members (8) overhanging at one of their ends.

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6. The machine as claimed in claim 4, characterized in that the endless running support means comprise two parallel endless chains (11) supporting pushing members (8) by the respective ends of the latter.

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7. The machine as claimed in any one of claims 1 to 3, characterized in that the second conveyor (4) is suitable for moving the objects (2) on a curvilinear trajectory (5) and in that this second conveyor (4) comprises several pushing members (8) supported by support means (11) mobile on a partially closed curvilinear trajectory parallel to said trajectory (5) of the objects.

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8. The machine as claimed in claim 7, characterized in that the support means (11) are rotatable about a vertical shaft (18) and in that the pushing members (8) are radiating in an overhanging manner.

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9. The machine as claimed in claim 7, characterized in that the support means comprise at least one endless chain (11) opening out in a curvilinear manner parallel to the tray (10) and in that the pushing members (8) are radiating in an overhanging manner.

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10. The machine as claimed in any one of claims 5, 7, 8 or 9, characterized in that the first conveyor (1) moves the objects (2) placed one after the other and in that each pushing member (8) is brought laterally to the first conveyor (1) in order to contact the first n objects (2) present on said first conveyor.

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11. The machine as claimed in claim 10, characterized in that the objects (2) on the first conveyor (1) are juxtaposed to one another.

5 12. The machine as claimed in claim 10, characterized in that the objects (2) on the first conveyor (1) are separated from one another by a given pitch (p).

10 13. The machine as claimed in claim 5 or 6, characterized in that the objects (2) on the first conveyor (1) are separated from one another by a given pitch (p) and in that the pushing member (8) is interposed between the object numbers n and n+1 (counted from the first object at the head of the first
15 conveyor).

14. The machine as claimed in claim 11 or 13, characterized in that the objects (2) are juxtaposed one after the other on the first conveyor (1) and in
20 that it comprises, associated with the first conveyor (1), separator means (13) suitable for separating the objects from one another by a given pitch.

15. The machine as claimed in claim 5, characterized
25 in that grouping means (12) suitable for establishing a given gap between the object numbers n and n+1 (counted from the first object at the head of the first conveyor) are associated with the first conveyor (1) and in that the pushing member (8) is interposed in the
30 gap created between said object numbers n and n+1.

16. The machine as claimed in any one of claims 1 to 15, characterized in that each pushing member (8) is a bar.